

ISSUES AND INNOVATIONS IN NURSING EDUCATION

The primary and secondary care interface: the educational needs of nursing staff for the provision of seamless care

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Submitted for publication 31 January 2000

Accepted for publication 8 February 2001

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WERRETT J.A., HELM R.H. & CARNWELL R. (2001) *Journal of Advanced Nursing* 34(5), 629–638

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Aim. To identify nurses' perceived deficits in the knowledge and skills required to provide effective seamless care, so that appropriate training could be provided.

Background. A clear understanding of nursing staff roles, skills and resources is paramount to work at the primary/secondary care interface. Nursing staff require an educational model that will provide a clear understanding of how their roles coalesce with other healthcare professionals. There is little evidence that examines the educational needs of nurses related to changing care boundaries.

Design/Methods. The study used methodological triangulation to explore these issues within current practice. Focus groups were used to generate items for inclusion in the questionnaire. Questionnaire design was based on an importance-performance analysis. This procedure has been effective in developing health care marketing strategies. A stratified random sample of nursing staff ($n = 722$) from the participating trusts received the questionnaire, eliciting a response rate of 172 (23.8%).

Results. Factor analysis provided a list of seven training categories in order of training need priority: information technology, awareness of roles, communications within seamless care, working across boundaries, professional issues, practice-related issues, delivery of patient/client care issues. There were no differences in nurses' training needs across NHS trusts. However, differences were highlighted for staff located in primary or secondary settings or working across the interface.

Conclusions. Despite there being a vast range of training issues the majority of nurses appear to have a clear idea of their training needs for the provision of seamless care. A training programme required which targets the specific needs of nursing staff working at different positions across the primary/secondary care interface.

Keywords: seamless care, continuity of care, nursing, educational needs, primary/secondary care interface, discharge planning, hospital, community

Introduction

The recent United Kingdom (UK) government White Paper '*The New National Health Service (NHS)*' (Department of Health (DoH) 1997) suggests that a clear understanding of the roles, skills and resources of nursing staff is paramount to work at the interface between primary and secondary care. Providing total care to patients may involve different professionals from health and social services, and other voluntary and statutory agencies. Each service has organizational and professional boundaries that are governed by management structures, environmental and financial factors, role definitions, skills and professional culture. Hence, successful communication or collaboration between health care professionals is an important component of effective patient care. A number of important issues contribute to nursing interaction across the primary/secondary care interface.

Provision of coherent and contemporaneous information

The timely transfer of information is essential for the anticipation of patients' needs prior to community nurses' involvement (Kersten & Hackenitz 1991). The UK Department of Health circular '*Discharge of patients from hospital*'s (1989) stipulates that the discharge of patients from hospital must include provision for two-way communication of information, in good time, to general practitioners (GPs), community nursing services and social services agencies. In reality the majority of communications are one-way, from the hospital to community staff. Structures are rarely in place to facilitate the involvement of community staff prior to discharge, or for easy contact or access to relevant hospital staff following discharge (Closs 1997). However, transfer of information from community to hospital is crucial for the preparation of discharge planning and subsequent care packages.

An important issue in achieving good communication across the primary/secondary interface is effective and planned use of resources to ensure that contemporaneous and relevant high quality information is transmitted from one sector to another. The implementation of electronic communication systems in the UK NHS has been slow. A major problem in the development and use of these systems is the requirement that the user has access to up-to-date systems and the skills to use them. The use of automated discharge summaries may result in significant time savings and encourage interdisciplinary discharge planning (Siders & Peterson 1992). Interdisciplinary discharge planning will, however, also require clear delegation of responsibility.

The allocation of responsibility to a specific professional facilitates the clarification of procedures at transfer from

hospital to home (Anderson & Helms 1994). However, a significant problem concerns the motivation of nursing staff to consult with community nurses about the treatment of aftercare patients. For community staff, problems include lack of public relations and maintaining and updating experience with complicated nursing activities. Regular consultation between hospital and community staff and assessing appropriate education and training are therefore imperative.

Defining educational needs

In the UK, Project 2000 preregistration education programmes (United Kingdom Central Council for Nursing, Midwifery and Health Visiting (UKCC) 1986) aim to equip nurses with the skills and knowledge required to work generically across any setting, with further education required for specialization. The degree to which this aim has been achieved remains unclear. In part because as the provision of community placements and supervision during training has been fraught with difficulties, resulting in the scarcity of suitable posts for Project 2000 diplomates (Whittaker *et al.* 1997). Furthermore, support systems, such as preceptorship, have not been fully developed. Thus, although the ability to practise across the interface is desirable in first level nurses, the necessary structures may not be in place. The structural problems in employing newly qualified first level nurses therefore require further exploration before the ideals of Project 2000 can be realized (Clark *et al.* 1997). In addition, early discharge planning and the large number of higher dependency patients, together with an increase in workload as a result of rapid patient turnover, suggest that the need for acute care nurses will remain unchanged. However, even if the ability to practise across boundaries in different settings is a desirable skill at generic level, evidence from the Hospital at Home (HaH) schemes suggest that it is essential for both specialist and advanced practitioners to be available (Ware 1996, Hibberd 1998). Moreover, the development of such skills can be facilitated through teambuilding.

Teambuilding and collaboration

Modern health care systems involve a complex network of care providers. Thus, it is essential that organizations recognize the benefits of good teamwork practices. In a nursing environment a proactive approach to teambuilding is important in facilitating co-operation and collaboration. Indeed, problems concerning interrelationships, workload, staffing strategies and training can all be overcome by the development of teams (Porrás *et al.* 1985).

Effective teamwork will increase collaboration between those involved. Competence in communication skills is fundamental to collaboration in health care. The more effectively that health care staff communicate, the more accomplished they become in fulfilling their health service role (Smith 1996). The advantages of effective communication can be seen in the reduction of wasted visits by community staff, saving time and money, and the maintenance of up-to-date information (Armitage & Williams 1990). Organizations that demonstrate a commitment to teamwork and collaboration are able to promote shared visions and common objectives. Conversely, a lack of collaboration can result in the fragmentation of patient care, patient dissatisfaction, poor outcomes and job dissatisfaction for health professionals (Henneman *et al.* 1995). To achieve interorganizational and interagency collaboration, health structures must develop mutually beneficial relationships through the exchange and sharing of information, and implementation of joint programmes.

Summary

The White Paper '*The New NHS*' (DoH 1997) clearly states a need for an educational model that will give nurses a clear understanding of how their roles coalesce with those of other health and social care professionals. To provide seamless care nurses need a clear understanding of the roles, skills and resources that each possesses. Despite these suppositions there is little evidence which examines the educational needs of nursing staff in adjusting to changing care boundaries.

In light of the Government White Paper (DoH 1997), the Black Country¹ Education and Training Consortium commissioned the University of Wolverhampton, School of Nursing and Midwifery, to investigate both the current practice and the educational requirements of nursing staff for the effective delivery of nursing care across the primary and secondary interface. This paper reports on the processes involved.

The study

Purpose

The purpose of this study was to identify nurses' perceived deficits in the knowledge and skills required to provide

effective seamless care, so that appropriate training could be provided.

Methods

Study population

Three NHS trusts from within the Black Country Consortium were identified. One trust combined both hospital and community staff, and the other two were separate trusts providing hospital and community services, respectively. The study population comprised acute care staff working in the medical and surgical areas and all primary care staff, grades D (newly registered nurses) to I (nurse managers). A total population of 1452 nursing staff across the trusts was identified for inclusion in the study.

Data collection and ethical issues

Data collection developed into two phases: focus groups and questionnaires. Ethics committee approval was obtained for both phases of the study. Participants were assured of confidentiality and all data were stored according to the Data Protection Act (1998). Anonymity was assured by avoiding reference to individuals attending the focus groups and by avoiding the use of codes on the questionnaire.

Phase 1 focus groups

Following Morgan's (1998) guidelines, five separate focus groups were used to aid the generation of items for inclusion in the questionnaire. A random sample of 90 participants (18 per focus group) were invited to take part. Participants were drawn from both hospital and community trusts and comprised staff grades ranging from newly qualified nurses (grade D) to Clinical Nurse Specialists (grade G). A group of educationalists from the University of Wolverhampton, School of Nursing and Midwifery, was also included. Focus groups were homogeneous and grouped according to practice setting and nursing grade. Each focus group lasted 90 minutes.

A weakness of the focus groups was the poor attendance, with only 17 of the 90 available participants attending the groups. The average attendance at focus groups was three, the range being between two and five. This was below the recommended minimum (Morgan 1988). Whilst acknowledging this limitation, the data obtained were considered to be relevant to the design of the questionnaire. This weakness was, however, addressed through the use of literature to support the data obtained and to aid the generation of items for the questionnaire.

¹ The Black Country is an area of the English West Midlands where the industrial revolution began in the late 18th and 19th centuries. Extensive industrialization with mining and iron and steel manufacture resulted in a bleak (black) landscape.

Phase 2 questionnaire development

Using content analysis, a list of salient attributes was developed from the literature and focus group data. Questionnaire design was based on an importance-performance analysis, which enables the simultaneous examination of participants' attitudes towards key characteristics of the organization or service being studied. Importance-performance analysis is a marketing research technique that has been used in a range of markets (Hawes *et al.* 1982, Martilla & James 1977), and has also been shown to be effective in developing health care marketing strategies (Hawes & Rao 1985) and in defining the role of the registered nurse in discharge planning (Johnson *et al.* 1988).

A five point 33-item bi-polar rating scale was developed to facilitate concurrent examination of nurses' depth of knowledge and experience of salient attributes, as compared with their use in current practice. Knowledge/experience attributes were scored from '1 least knowledge/experience' to '5 most knowledge/experience'. Scoring of the use of these attributes in current practice ranged from '1 least used in current practice' to '5 most used'. Identification of deficits between knowledge/experience and use in current practice provided a practical method for identification of nurses' training needs in relation to seamless care. An example of the bi-polar rating scale used is provided in Table 1.

Sampling and procedure

Using a stratified random sample, a total of 722 nurses from all participating trusts received the questionnaire. To increase response rates and ensure confidentiality, respondents were requested to return the questionnaire in the Freepost envelope provided. Participation was entirely voluntary and anonymity was maintained throughout the study.

The questionnaire was distributed via the participating trusts' internal post and was co-ordinated by them. Despite the efforts of the project team and trusts to increase response rates via posters, visits to the wards and community, and messages via computing networks, only 68 (9%) were returned. As participants had been ensured anonymity all 722 questionnaires were re-distributed 4 weeks later. Participants who had completed and returned a questionnaire at the initial mailing were not asked to complete a second one.

Table 1 An example of the bi-polar rating scale

Your knowledge of					Topics	Your use in current practice				
1	2	3	4	5	Interprofessional work	1	2	3	4	5
1	2	3	4	5	Available statutory agencies	1	2	3	4	5

Following re-distribution of the questionnaires 172 (23.8%) were returned.

Data analysis

Coefficient α for the 33 items was 0.83. Although this score indicates a high reliability, because of the low response rate it should be noted that the findings cannot be treated as generalizable to other nursing settings.

The data were subjected to a factor analysis, using principal component analysis with varimax rotation. Table 2 shows the seven training components, four relating to 'knowledge' and three components relating to 'experience', that were identified with eigenvalues over 1.

Scoring of this type of questionnaire is arbitrary and suggests relative rather than absolute levels of the attributes. It was determined that if a participant obtained a score of three or less for knowledge of an attribute and a score of three or higher for use in current practice, this demonstrated a low knowledge yet a high use of this attribute in current practice and thus identified a critical area for training. A score of three or less for experience of attributes and their use in current practice also identified the related area as a training need. A 95% confidence interval was agreed, thus providing a 5% probability of error. If the critical area contained greater than 5% of the total sample then there is a 95% probability that there is a training need.

Frequency scores for each of the identified critical areas were calculated for each pair of variables (that is knowledge and use in current practice, experience and use in current practice) and used to calculate a mean percentage score for each of the principal components identified by the varimax rotation. This provided a list of components in order of training need priority (see Table 2).

Table 2 Principal training components identified by varimax rotation and component mean percentage score

Principal training component	Component mean percentage score
Knowledge training components identified by varimax rotation	
Awareness of roles	29.5
Working across boundaries	24
Professional issues	22
Practice related issues	18
Delivery of patient/client care issues	11.5
Experience training components identified by varimax rotation	
Information technology	84
Awareness of roles	63.3
Communications within seamless care	36

Results

A total of 172 nurses responded to the questionnaire. Of these 68% ($n=117$) were based in an acute setting, 23.3% ($n=40$) worked in the community and 7.6% ($n=13$) worked across the interface. However, 30.2% ($n=52$) of all respondents stated that their work involved working across hospital and community boundaries. Table 3 shows the response rate, location and grades of the participants. The average years of experience in the nursing profession was 15.6 years ($SD=9.00$, $n=166$), ranging from 1 to 41 years.

Questionnaire findings

Information technology

Nursing staff identified information technology (IT) as the most important area for training. Over 70% of all staff, regardless of location, stated that they had a low experience and use of IT skills in their current practice (see Table 4). All of the staff working at the interface (100%) require training in the use of E-mail and the Internet. A high percentage of hospital-based staff (94% and 85.7%) and community-based staff (88.4% and 94.9%, respectively) were also identified as having a training need in these two areas.

Awareness of roles

Role shadowing and cross-training were identified as the most important areas of training within the category 'Awareness of Roles'. Over 83% of hospital nursing staff, 79.5% of community-based staff and 61.5% of staff working at the interface indicated that they had little experience of cross-training in their current practice. A further 82.2% of community-based staff, 69.9% of hospital staff and 61.5% of staff working across the interface highlighted a training deficit in relation to their experience of role shadowing in practice. Both hospital and community-based respondents also felt that the issue of role boundaries presented an area

for training. This was less problematic for those respondents who worked across the interface.

Team work and teambuilding skills were also identified as requiring training. Nursing staff working across the interface had a low knowledge, yet felt that teamwork was required in their current practice. Of these, 46.2% of staff also felt that they had little experience of teambuilding skills in relation to seamless care. A further 56.4% of community-based respondents had less experience of teambuilding skills, while 15.4% had low knowledge and use of teamwork in current practice. In addition, 38.6% of hospital-based respondents required training in relation to teambuilding skills and 16.4% indicated that they had low knowledge but greater use of teamwork in practice.

Table 4 shows that more than 40% of staff in all locations experienced service duplication in their current practice. A total of 59% of community staff, 51.4% of hospital-based staff and 41.7% of staff working across the interface indicated a need for training regarding this attribute.

Communications within seamless care

Communication between health professionals and agencies was also seen as important. Communication with other nurses was more of a problem for staff working in the hospital (28.1%) and community setting (46.2%). However, a small percentage of staff working across the interface (15.4%) experienced less positive attitudes when communicating with other nurses. Similar results were obtained when asked about their experience of communications with other health professionals and other agencies outside the NHS. It would appear that a greater proportion of staff working across the boundaries experienced more positive communication with other health professionals and agencies.

Working across boundaries

Within the category of 'Working across boundaries' a higher percentage of hospital staff (27.4%) indicated a greater need for information and training regarding the availability of

Table 3 Location, nursing grades and questionnaire response rates

Location	Nursing grade and questionnaire response rate*						Grade not stated	Total number of questionnaires returned
	D	E	F	G	H	I		
Hospital	29	41	26	15	3	0	3	117
Community	3	2	3	29	2	0	1	40
Work across the interface	1	1	0	8	3	0	0	13
Location not stated	0	0	0	0	0	0	2	2
Total number	33	44	29	52	8	0	6	172

*Lower alphabetical grades are assigned to less experienced registered nurses, higher grades are awarded to specialist/managerial nurses.

Table 4 Percentage score of questionnaire items identified for each training component and location

Training component	Questionnaire item identified in each component	Percentage score of questionnaire items for each location		
		Hospital	Community	Working across the interface
Information technology	Using E-mail:	94	88.4	100
	IT skills	71.7	79.5	75
	Using the Internet	85.7	94.9	100
Awareness of roles	Role shadowing	69.9	82.1	61.5
	Cross training (acute/community)	83.9	79.5	61.5
	Shared learning	45.5	64.1	61.5
	Duplication of services	51.4	59	41.7
	Teambuilding skills	38.6	56.4	46.2
	Teamwork	16.4	15.4	30.8
	Role boundaries	32.1	30.8	16.7
Communications within seamless care	Positive attitudes communicating with other nurses	28.1	46.2	15.4
	Positive attitudes communicating with other health professionals	30.1	46.3	7.7
	Positive attitudes communicating with other non-NHS agencies	5.3	36.8	15.4
Working across boundaries	Availability of statutory agencies	27.4	15	15.3
	Availability of voluntary agencies	28.6	21.1	23
	Multiagency meetings	21.6	20.5	8.3
	Interprofessional work	24.8	40	23.1
Professional issues	Maintaining research based knowledge	19.1	42.1	15.4
	Clinical supervision	26.3	35.9	30.8
	Accountability	19.6	25	15.4
	Interpersonal skills	23.2	37.5	7.7
	Resource management	27.3	33.3	23.1
Practice related issues	Preadmission assessment	4.4	8.3	23.1
	Documentation procedures	7.9	25	7.7
	Care requirements of technologically dependent patients	23.5	26.3	8
	Multidisciplinary documentation (joint)	7	33.3	23.1
	Leadership skills	14.9	30	15.3
	Written skills – user friendly terminology	18.4	30	7.7
	Decision making process	18.4	40	16.7
	Care management skills	23.4	40	16.6
	Data Protection Act	34.5	38.4	15.5
Delivery of patient/client care issues	Client/patient involvement in care	13.9	12.5	0
	Families involvement in care	14	8.1	7.9

statutory agencies. It would appear that community-based staff and those working across the interface have a greater knowledge and use of statutory agencies in current practice. In contrast, between 20% and 30% of respondents from all locations require training in relation to the availability of services from voluntary agencies.

Other issues in this category were those of multiagency meetings and interprofessional work. Low knowledge relating to multiagency meetings, yet high use in current practice,

was indicated by over 20% of respondents in hospital and community settings. Participants working at the interface (8.3%) indicated a higher knowledge and attendance at multiagency meetings in practice. Regarding interprofessional work, 40% of respondents working in a community setting identified this as an area requiring training. Knowledge and involvement in interprofessional work in current practice was higher for hospital-based staff and those working at the interface.

Professional issues

The component 'professional issues' revealed that community-based nursing staff recorded a greater need for training in all the attributes in this component. Maintaining research-based knowledge was identified as a critical area for training by over 40% of community-based staff. In contrast, <20% of hospital staff (19.1%) and staff working across the interface indicated that they had a training need in this area. Resource management and accountability were also identified as critical areas for training. Between 23% and 34% of nursing staff across all locations indicated a need for resource management training, while a quarter of community nursing staff recorded a low knowledge of accountability yet indicated a need for this attribute in current practice.

Practice related issues

An important practice issue in relation to seamless care is the care requirements of technologically dependent patients. Both hospital and community-based nursing staff expressed a low knowledge but a high demand for skills to nurse technologically dependent patients (23.5% and 26.3%, respectively). A smaller percentage of staff working across the interface (8%) identified this as a training need.

A third of community-based nursing staff (33.3%) and nearly a quarter of staff working across the interface (23.1%) were identified as requiring training regarding multidisciplinary documentation. Hospital-based participants indicated a higher knowledge and use of multidisciplinary documentation, with only 7% requiring training in this area. Of paramount importance to any documentation is the issue of the Data Protection Act (1998). Over 30% of hospital (34.5%) and community (38.5%) based staff reported a low knowledge of the Act. A further 15.5% of staff working across the interface were identified as requiring information and training.

Delivery of patient/client care issues

The delivery of patient/client care issues appears to be more problematic for staff working in hospital settings. Low knowledge of the issues surrounding both patient/client and family involvement in care was recorded by 14% of hospital-based staff. A further 12.5% of community-based staff had low knowledge of the issues surrounding patient/client involvement in care, yet recorded a high involvement of patients/clients in their practice. However, community-based participants recorded greater knowledge of and higher family involvement in care, with only 8.1% requiring training in this area.

Discussion

The main aim of this study was to identify nurses' perceived deficits in the knowledge and skills required for the effective delivery of seamless care. The adoption of market research techniques was shown to be an effective means of evaluating training needs. Although there were no apparent differences identified in nurses' training needs across the trusts, differences were highlighted with regard to the location of staff in the primary or secondary setting. Despite the large range of training issues identified, most nursing staff appear to have clear ideas of their training requirements for the provision of seamless care.

The nursing profession is increasingly confronted with the need for proficiency with IT, which has the potential to help staff work more efficiently and effectively. However, the results show that the majority of nursing staff lack an understanding of the fundamentals of IT. The greatest need for training in relation to the Internet and E-mail was for those who worked across the interface. However, this was also a high priority for hospital and community-based staff. The benefits of IT skills in the NHS are far reaching. For a high proportion of staff access to the Internet may enhance their research-based knowledge, this being a need identified by community-based staff. The Internet would allow staff to access a world-wide range of research findings important to evidence based practice and clinical governance. Unfortunately for many staff access to computer equipment is a significant barrier to the development of their IT skills.

Nursing staff across all locations recognized the importance of IT in the future of the NHS. This is consistent with findings that report that although electronic mailing systems are only slowly being introduced into the UK, electronic systems provide a speedy, cost saving and effective form of communication (Anderson & Helms 1994, Buffone & Beck 1994, Closs 1997). It is likely that the introduction of computerized patient records and multidisciplinary documentation will improve efficiency and reduce wasteful duplication (Pheby & Thorne 1994). As several studies predict, it is possible that the quality of nursing care will improve with the use of computers and IT (Burkes 1991, Grassey 1991, Carter & Axford 1993). Nursing informatics courses must, therefore, prepare staff to manage information, to research and communicate via computers (McGonigle & Eggers 1991).

A significant proportion of hospital and community-based staff were identified as having a great need for training regarding the Data Protection Act. It is a legal requirement that all staff involved in the use of data should be able to understand issues relating to its storage and security. This

training need is of paramount importance whether related to computerized or written records, and reports.

Other training issues relate to positive attitudes when communicating with other nurses, health professionals and non-NHS agencies. Community and hospital-based nursing staff show a greater need for training initiatives in this area. Less favourable attitudes when communicating with other staff can hamper the exchange of information between professionals. Poor communication channels may build resentment amongst staff resulting in an 'us and them' situation. Failure to communicate in a positive manner with non-NHS agencies can lead to lack of co-ordination and impede continuity of care for the client/patient. Lack of communication between health professionals is also reflected in the finding that hospital-based nurses had the poorest knowledge of voluntary and statutory agencies. To provide continuity of care effectively it is imperative that all nursing staff are aware of the services available.

Multiagency meetings and interprofessional work are also areas that require training initiatives. Community-based staff indicated that opportunities for interprofessional work were limited. Training initiatives that enhance knowledge and interprofessional involvement could therefore improve work at the interface. Time restrictions, however, often limit attendance at meetings, thus reducing collaborative practice as well as opportunities for liaison with other agencies and professionals.

Effective collaboration between agencies is often difficult to achieve. Iles and Auluck (1990) suggest that co-operation is more likely to succeed if autonomous agencies are motivated to exchange information, share resources and implement joint initiatives. If, as is shown above, there are less favourable attitudes to communication with non-NHS agencies and other health professionals, then this indicates a greater need for training in relation to this area. Clarification of professional skills and competencies, attention to role conflicts and clarification of accountabilities of team members are important issues requiring resolution.

Teambuilding skills also provide nurses with the opportunities and techniques to enhance collaboration through the resolution of interpersonal conflicts and promotion of better teamwork (Iles & Auluck 1990). In the present study a high proportion of staff, regardless of their location, indicated that they had little experience of teambuilding skills, yet a higher percentage felt that they had greater knowledge and use of teamwork in current practice. Teambuilding skills would enhance the collaboration process and in the long term would benefit care for patients. French and Bell (1984) suggest that teambuilding interventions should aim to improve the efficiency of teams, enabling them to identify

how they work together, and improve team cohesiveness and effectiveness. A lack of teambuilding skills can result in greater conflict and frustration rather than co-operation.

Other training issues closely related to teamwork and teambuilding skills are accountability and role boundaries. The vast range of professionals working from different backgrounds and agencies within the NHS may have resulted in confusion over role identity and boundaries. Lack of understanding of one's own role and of others' roles and responsibilities can lead to limited understanding of aspects of another individual's practice and depreciation of one's own contribution to the team. It is, therefore, essential that nursing staff demonstrate a clear understanding of each other's roles, responsibilities and level of expertise.

As professional roles are often cited as problematic for achieving continuity of care, role shadowing between hospital and community staff may overcome some of the associated problems. Role shadowing has the potential to reduce conflict between nurses and enhance the communication process. One focus group participant had experienced role shadowing and suggested that it helped to provide nursing staff with the opportunity to share information and skills and to develop a greater understanding of each other's roles. In addition, it provided a point of contact for communication across boundaries.

In today's health service nurses need a range of skills to manage the ever changing roles. Cross-training and the acquisition of extra clinical skills, are required to carry out these new extended roles. For nurses in the hospital and in community settings training initiatives are needed that focus on the changing role boundaries that result from multiskilling. One of the problems of cross-training programmes is nurses' poor knowledge base. This raises issues regarding the adequacy of pre- and postregistration education and training. It is imperative that cross-training programmes are adequately planned and resourced, with the possibility of relief from rostered duties and 'away days' for teambuilding (Jenner 1998).

The move away from traditional forms of care towards care in the community, and HaH schemes has led to an increasing demand for skills which enable technologically dependent patients to be cared for in their own homes. In the present study, training in the care requirements of technologically dependent patients was an issue for both hospital and community-based staff. This is particularly relevant where patients have complex needs and may involve practitioners crossing the hospital boundary to provide or supervise patient care. Enabling staff to care for technologically dependent patients should help to prevent admission to hospital and provide immediate care for patients following early discharge.

Surprisingly, the present study highlighted a need for training in relation to client/patient and family involvement in care. In a hospital setting it is important that patients and families are informed about all aspects of the impending discharge. Both community and hospital staff have the potential to educate patients and their families with regard to what to expect from their illnesses and drugs. In order to achieve seamless care it is imperative that patients and their families are well informed and able to become part of the decision making process.

Conclusion

This report has identified important training needs which will help to equip nurses to provide an effective and efficient seamless service. The evidence presented suggests that all staff, regardless of location, would benefit from a range of training initiatives that aim to improve skills and enhance the health care process. It is clear that teambuilding initiatives which aim to jointly clarify goals, define roles and responsibilities and enhance the full and timely communication between health professionals, are likely to be invaluable in the provision of seamless care. Interprofessional collaboration is proving to be an effective means of improving services at the point of delivery (Biggs 1993, Gradwell & Reeves 1998). However, the long-term success of training initiatives requires continual monitoring and review of progress to ensure the success of collaborative ventures.

Study limitations

A number of limitations of the study have been recognized. Because of poor attendance the validity of the focus group data was questionable. As the data were considered relevant to the design of the questionnaire, this limitation was addressed through the use of literature to substantiate and support the data obtained.

In addition, although the low response rate to the questionnaire suggests that the results cannot be generalized to a wider area, recent research (Visser *et al.* 1996) has demonstrated that surveys with a low response rate may be more accurate than those with higher response rates. It has also been shown that the implications of a study often remain unaltered by improvements in the response rate (Traugott *et al.* 1987, Pew Research Centre 1998). It is suggested that this is because when participants are pressurized into responding they are less likely to produce an accurate response (Greenwald *et al.* 1987). Given this evidence it is possible that these findings are indicative of a national trend. At the very least, they raise issues for local attention.

It should also be noted that, given the time limitations for the project a patient/client group was not included in the study. This might well have highlighted other training issues and deficits pertinent to services at the point of delivery.

Recommendations for educational practice

A training programme is required which targets the specific needs of nursing staff working at different positions across the primary/secondary care interface. The programme must provide the opportunity for self-development through 'hands on' experience of information technology and role shadowing. Simulation activities in the form of workshops could facilitate the development of teambuilding and communication skills. The use of critical incidents and reflection would be useful in addressing issues of interprofessional roles, access to and availability of resources, documentation, resource management, patient/family involvement of care, care requirements of technologically dependent patients and the Data Protection Act.

Acknowledgements

Thanks to the Black Country Education and Training Consortium for funding the project reported here.

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